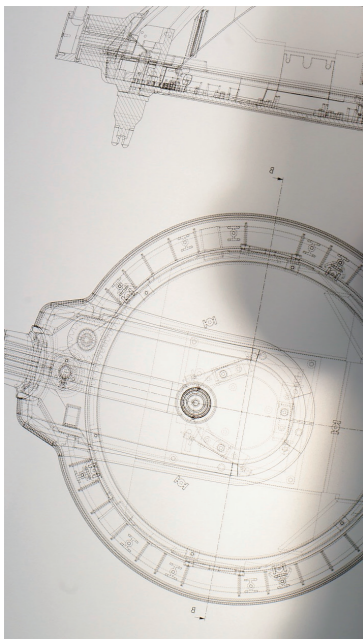
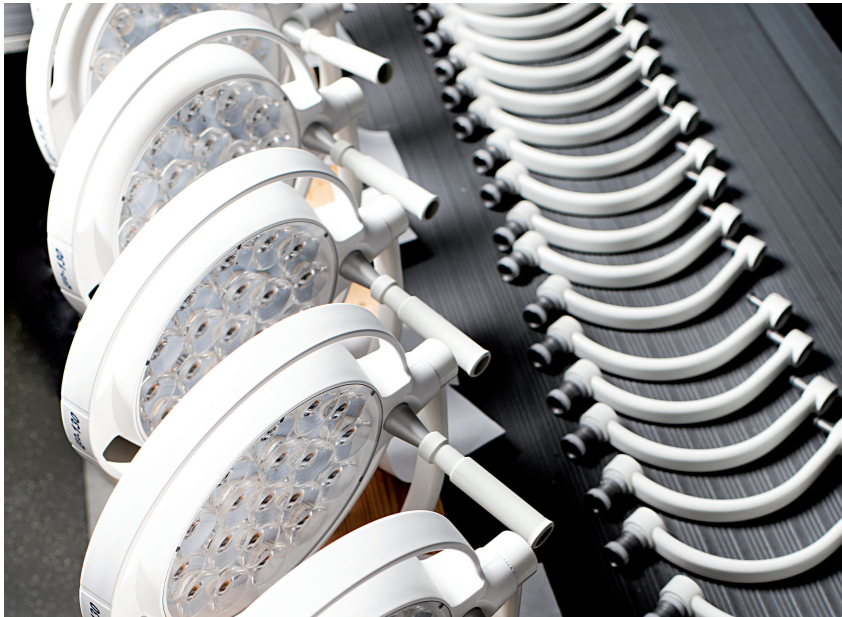


**Shadowless
surgical operation
theatre light**
OT-lights
from Dr. Mach



FIRST CLASS MEDICAL LIGHTS GO BY THE NAME OF – DR. MACH



Doctors worldwide operate, diagnose and treat patients with the aid of medical lights from Dr. Mach. For a very good reason: No other company offers a detailed portfolio of this kind under one roof. No other company has such a wealth of experience in the production and application of medical lights. And no other company offers such quality and reliability. Dr. Mach was founded 75 years ago and today is still what it always has been: A specialised family business with unique know-how. With ultramodern machinery and a well-trained and skilled workforce from various specialist fields, we develop and manufacture at our headquarters on the outskirts of Munich. All of our lights are designed and produced in Germany and dispatched from our headquarters. This, along with our endeavours to put the best lights at the disposal of doctors, is undoubtedly the reason why our lights are amongst the best in the world and are to be found in operating theatres in Montreal, Berlin or Kuala Lumpur – and right across the world, to be concise.



Quality in numbers

Quality can be expressed in numbers and dates. In 75 years we have created and accomplished a huge amount. We have held hundreds of thousands of talks and equally as many consultations. We have had tens of thousands of meetings in which customer wishes and product improvements were considered. And we have equipped ten thousand doctors, practices and hospitals with modern lights – on all of the earth’s continents, including Antarctica.

154,000

lux is the difference between our first light and our latest OT-light – an increase from 6,000 to 160,000 lux.

14,560

days is the lifespan of the longest currently still in use medical light from Dr. Mach – in short: it has been in use for 40 years.



139

constructional components are needed to assembly our Mach LED 6MC surgical light in 25 precise work steps.

-32

degrees is the average temperature in winter at a research station in Antarctica where Dr. Mach OT-lights have been working reliably for years.

408,000

metres distant from the earth flies the highest Dr. Mach product in service: a monitor holder that works faultlessly even in the zero gravity of outer space.

25

steps is the distance from the CEO’s office to the production hall.





It's a matter of concentration, experience, perfection and millimetres. It's all about 100% reliance and not wasting any of one's attention. It's about being able to accurately recognise tissue, structures and colour. It's about having the perfect light during the operation. For the light is good only if it is ideal without the surgeon constantly needing to make adjustments. Medical lights from Dr. Mach are therefore optimally matched to the situation and needs during an operation. Easy to handle, perfect in function, absolutely reliable and long-lasting. As a result, OT-lights from Dr. Mach ensure that surgeons worldwide are able to concentrate on what matters: preserving health and saving lives.





“Besides the illumination, I appreciate features such as shadow management, extraordinary depth illumination and uncomplicated handling. They allow me to concentrate on what I am best at: operate.”

Prof. Dr. med. Joachim Müller
ENT surgeon

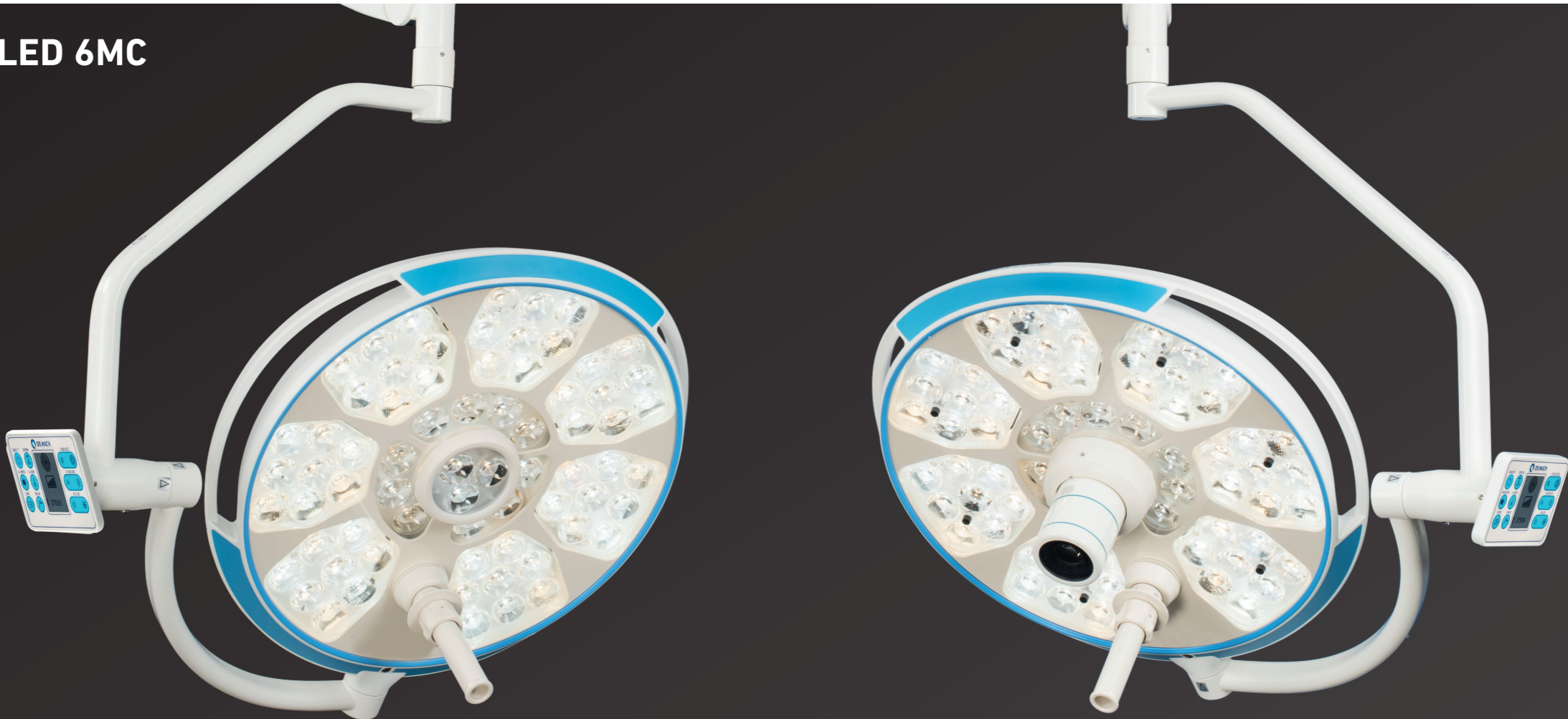


1 Cascade system:
Various lens types create vertical focusing of the light depth. This means: With increasing depth of the operating field, the light no longer needs to be re-adjusted manually.

2 Shadow management:
Should the movements of the surgeon block the light and thereby create shadows in the wound area, this is compensated immediately by an increase in the light emission of other LEDs – hence there are no shadows. As a result, the light field is always thoroughly illuminated during all movements.

3 Video management:
An HD or 4K camera which may optionally be integrated enables operations to be filmed. Thanks to high depth definition and autofocus, razor-sharp images are always possible – ideal for training purposes and documentation.

OT-light Mach LED 6MC



Options

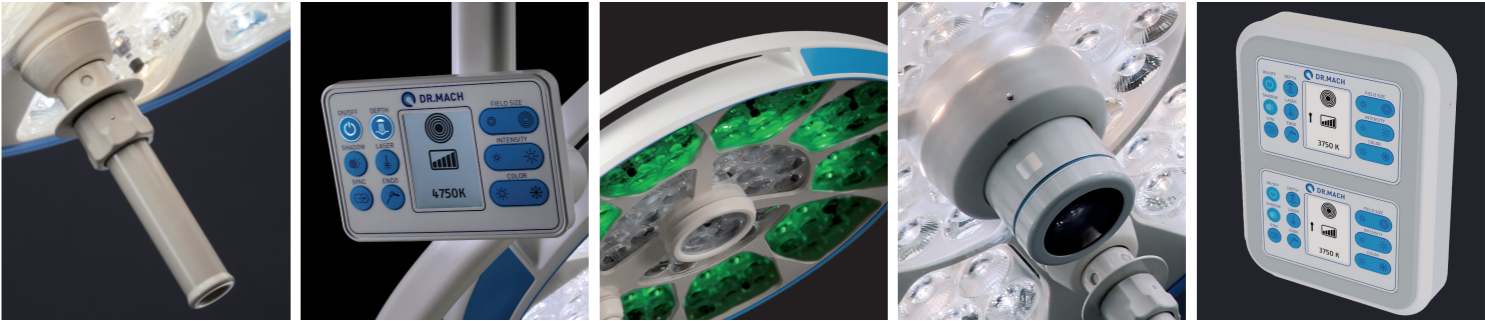
- Shadow management
- Laser pointer
- Communication
- Mechanical adjustment (larger light field diameter)
- Wall-mounted control
- Individual calibration of the colour temperatures and light intensities
- Diverse optional external interfaces and connections (e.g. Storz, Bender etc.)
- Camera preparation for HD or 4K camera (for details, please refer to our separate documentation)

OT-light Mach LED 6MC

Light intensity at 1 metre distance	160,000 Lux
Colour temperature	3,750 – 4,750 Kelvin
Colour rendering index Ra	98
Colour rendering index R9	99
Light field diameter	18 – 30 cm
Diameter of the lamp head	58 cm
Number of LEDs on the lamp head	69
Lifespan of the LEDs	60,000 h
Illumination depth 20 %	2,000 mm
Illumination depth 60 %	1,050 mm
Power consumption	87 W

OT-light Mach LED 150MC P

Light intensity at 1 metre distance	130,000 Lux
Colour temperature	3,750 – 4,750 Kelvin
Colour rendering index Ra	96
Colour rendering index R9	93
Light field diameter	20 cm
Diameter of the lamp head	40 cm
Number of LEDs on the lamp head	26
Lifespan of the LEDs	60,000 h
Illumination depth 20 %	1,740 mm
Illumination depth 60 %	870 mm
Power consumption	29 W



Design
Aesthetics meets ergonomics meets high tech. Our OT-lights are designed to be optimally functional, handled with maximum convenience and radiate minimal heat.



Handle
By virtue of its asymmetric position, the Dr. Mach handle allows the wound field to be illuminated optimally. In addition, beside the focusing a second setting can be controlled with the sterile area of the handle.



Laser pointer
An optional fine laser dot defines the centre of the light field and thereby aids optimal alignment of the light field to the wound area.

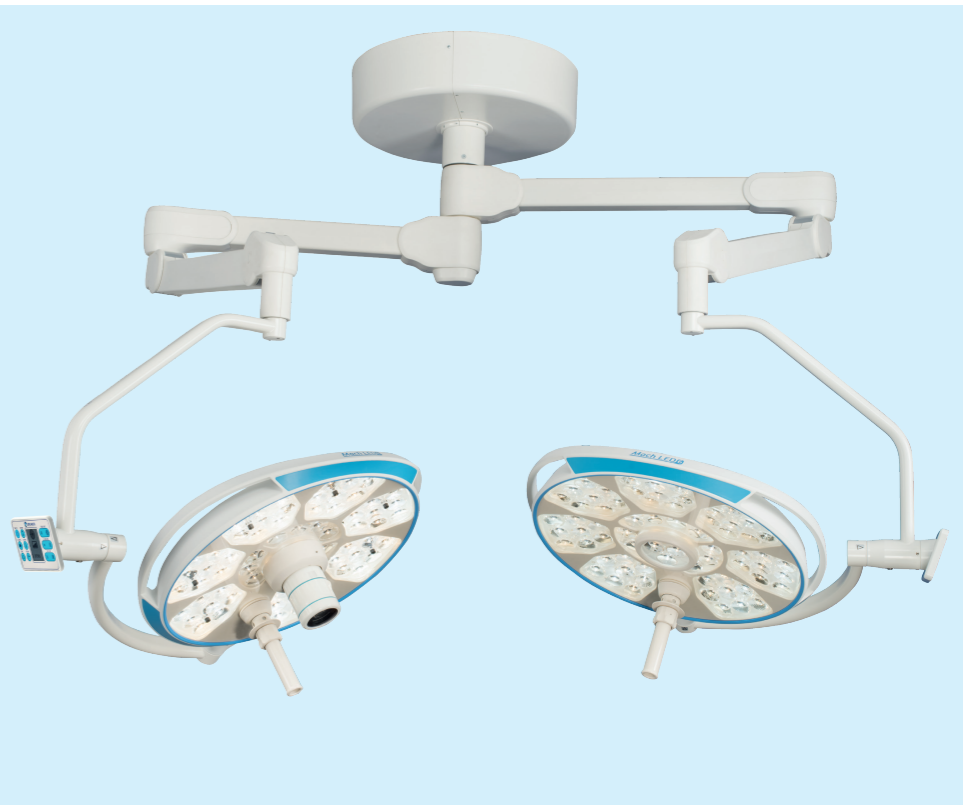


Mach LED 6MC and LED 6M on the standard axis

Ceiling suspension OT-lights combination: 2-arm suspension for various Dr. Mach light models. One arm without stops 360° swivellable, other arm swivellable with stop at 330°.

Mach LED 6MC and LED 6M on the heavy central axis

Ceiling suspension OT-lights combination: 2-arm suspension for different Dr. Mach light models. Both arms without stops 360° swivellable. Also available as treble and quadruple axis.



Highlights of the Mach LED 6MC

The diverse features of the LED 6MC puts it amongst the most modern OT-lights on the market. Every characteristic and functionality is aimed at giving surgeons worldwide the best possible prerequisites for a successful operation.

Outstanding depth illumination

One of the highlights of the new Mach LED 6MC is the cascade system. Different lens types are used in this system. These lenses have their focusing at 70, 100 and 130 cm. As a result, a vertical focusing of the light beam throughout the depth of the wound canal can be achieved. Thus the surgeon no longer needs to manually re-adjust the light when the depth of the operating field increases.

Large focusing range

The size of the light field can be varied by turning the sterilisable handle. The focusable light beam allows spot illumination of deepest wound channels with high light intensity and exact matching of the light field diameter to the surgical situation. The focusing is achieved by means of mechanical (optional) and electronic light field adjustment. The brightness of the light field remains constant.

Automatic shadow management

A further innovation is the shadow management, which is rendered possible by numerous sensors in the light. Any cluster that has its light disturbed by the surgeon is turned off. At the same time, the other light clusters increase in intensity in order to compensate for the shadow. Even if the surgeon changes position, the light field remains evenly illuminated without the need to move the light manually. The lux remain constant.

Almost perfect colour rendition

With almost perfect colour rendition values of $R_a = 98$ and $R_9 \text{ (red)} = 99$, you can easily discern the finest colour nuances in tissue. To also recognise the different red tones of the wound area, an exact rendition of the red colour range is essential. Rendering index $R_9 \text{ (red)} = 99$ means the surgeon recognises details much more easily. The colour spectrum of the wound area appears natural with rich contrast. The OT-light is also noticeably more comfortable for the eyes. The colour spectrum of the wound area appears natural with rich contrast. The OT-light is also noticeably more comfortable for the eyes.

Antibacterial coating

For maximum hygiene in the operating theatre, the new generation of surgical lights have a closed, easy-to-clean surface. In addition, they have an antimicrobial coating that prevents the growth of microorganisms and thus helps to avoid infections.

Optimal flow properties

The shapes of the housings are aerodynamic and thus ideally suitable for laminar-flow systems (climatic ceilings).

Suspensions and configurations

Our OT-lights afford various combination- and suspension options. Different methods of fixation and support arms are available. Here are some examples of possible combinations. As a single light, the Mach LED 6MC is available as wall, ceiling and mobile model.

- 1 Mach LED 150MC P and LED 150MC P on standard axis central axis**

Double combination light

2 Mach LED 6MC and LED 150MC P with storage tray on heavy central axis

Triple combination with 4K camera and storage tray

3 Mach LED 6MC Ceiling model

Single light with ceiling suspension
-
- 4 Mach LED 6MC Wall model**

Single light on wall mount

5 Mach LED 6MC with central spring arm

Light with only one quarter yoke, recommended for a ceiling height under 2.80 m

1



2



3



4



5



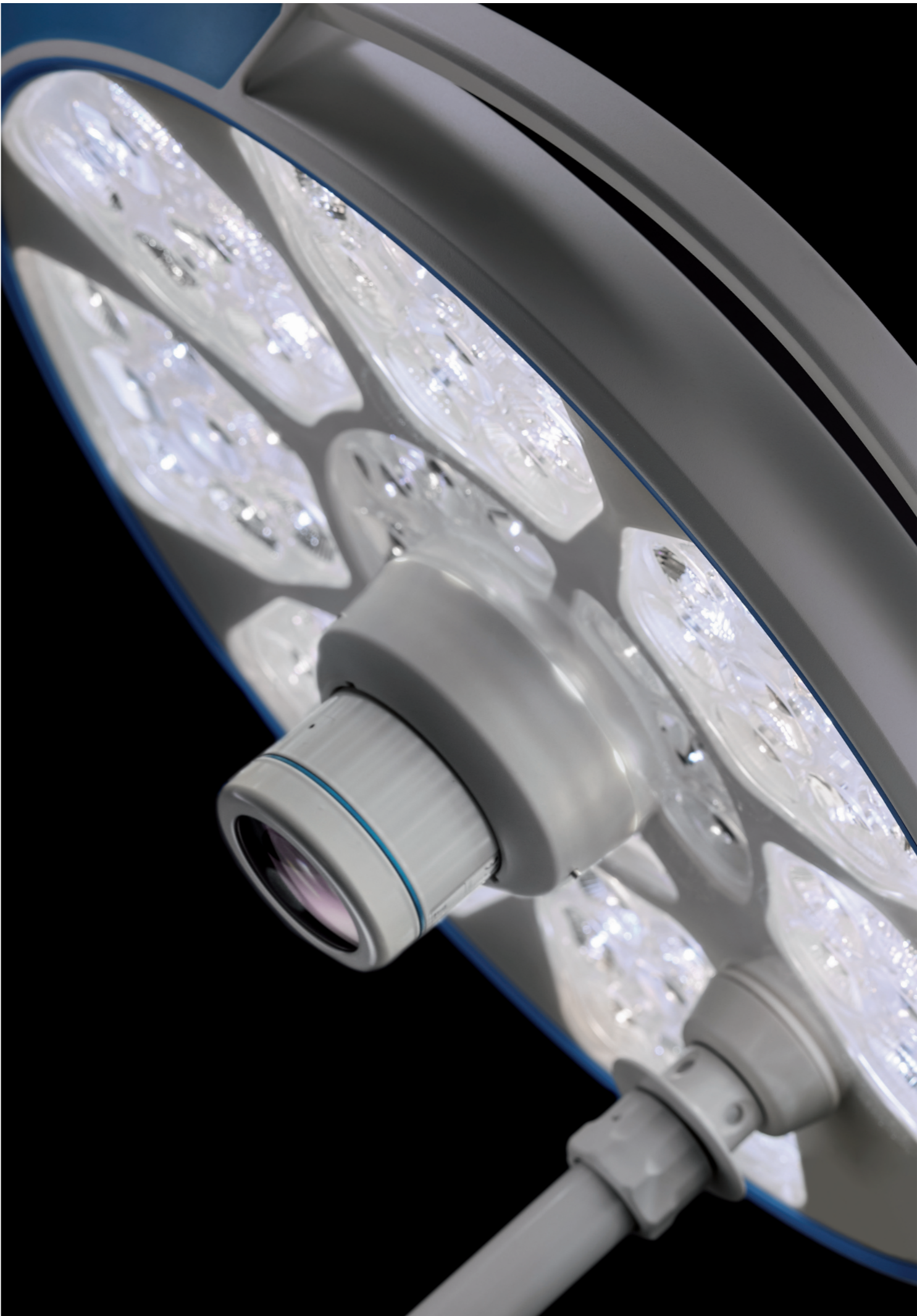
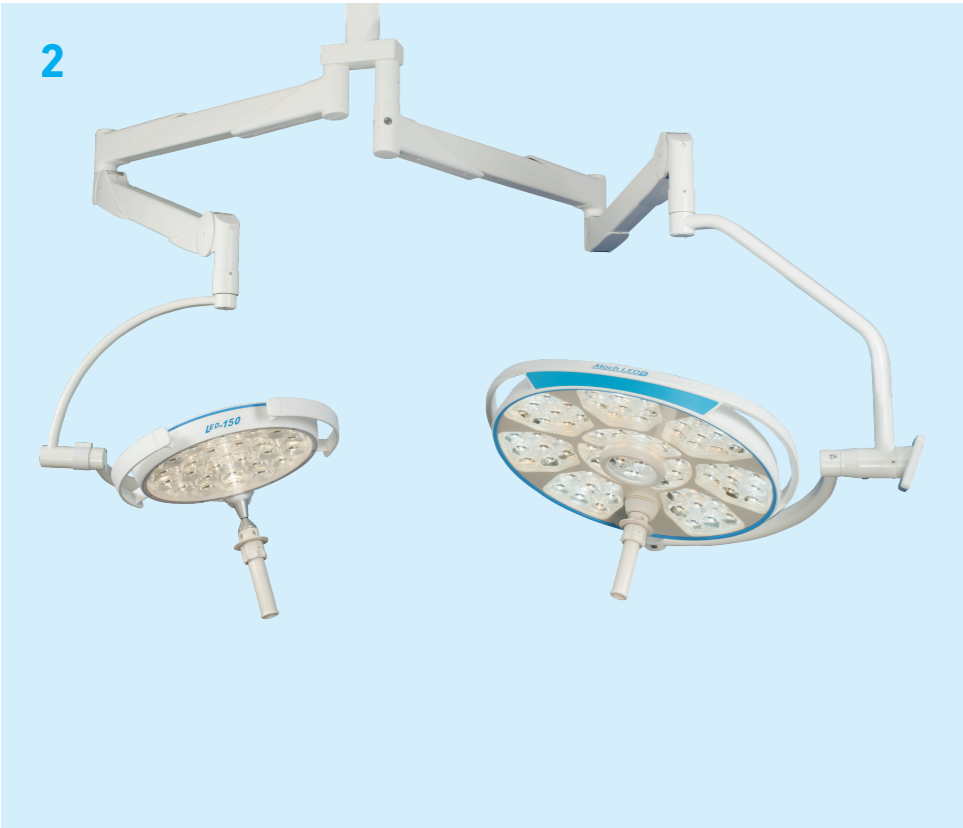
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Double combination light

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At home all over the world. In over 100 countries and on all continents, Dr. Mach OT-lights are synonymous with exceptional quality, reliability and engineering excellence. Together with our partner distribution networks, we sell and maintain Dr. Mach medical lights for doctors from all spheres. For decades our name has stood for:

Made in Germany – used all over the world.

Your quick link to Dr. Mach. For all queries concerning our medical lights or our company please contact our **India Branch: +91 (0) 22 26 03 11 00**

Or send us an **email to: sales@dr-mach.in**

Dr. Mach India Pvt Ltd. • Mumbai – India – 400053

**This way to your
contact person**




Sustainability for man and the environment. Dr. Mach lights are people-oriented: Light that enables doctors to preserve health and save lives. We absolutely pursue the notion of a people-centric approach: to employees, the environment and commercial responsibility. Our commitment in this regard grows steadily:

The solar-panel system on the roof of our new company headquarters produces just under 100kWh. The waste heat from our manufacturing machinery is used as an energy source and our building insulation meets the strict efficiency standard KfW 55.

We place external preparation and legwork preferentially with establishments in the region that employ people with cognitive and physical limitations. We regularly sponsor local clubs and charitable institutions.

And we continually strive to increase our involvement – for the health of people and the preservation of nature.





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